

Application No. 09/874,381
Reply to Office Action dated June 5, 2003

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

7,
C 1

1. (Currently Amended) An electronic device, comprising:
a body of semiconductor material having a first and a second face;
an electrical connection region formed on a periphery of said first face;
a covering structure, covering said first face;
an opening in said covering structure, the opening being of a size that is greater than a sized of a portion of a selected lead and positioned to expose a portion of the first face, including said electrical connection region, such that the portion of the selected lead is positionable within the opening and configured to admit a lead extending in a direction substantially parallel to the first face, to contact the electrical connection region; and
a heat dissipation region, in direct contact with said second face.

2. (Original) The electronic device of Claim 1, wherein said heat dissipation region and said second face of said body have equal area.

3. (Original) The electronic device of Claim 1, wherein said heat dissipation region is of metal, preferably of copper.

4. (Previously Presented) The electronic device according to claim 1, wherein said heat dissipation region has a thickness of 50 to 200 μm .

5. (Original) The electronic device according to claim 1, wherein said covering structure comprises a passivation region and a protective region of a polymer material.

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6. (Original) The electronic device of Claim 5, wherein said polymer material comprises polyimide.

7. (Original) The electronic device of Claim 5, wherein said polymer material comprises "SU8".

C 8. (Original) The electronic device according to claim 5, wherein said protective region is opaque.

9. (Original) The electronic device according to claim 5, wherein said protective region has a thickness of 20 to 70 μm .

10.-26. (Canceled)

27. (Currently Amended) The device of claim 1, further comprising ~~a metallic~~ the selected lead affixed at a first end to the electrical connection region and extending from the connection region in a direction substantially parallel to the first face.

28. (Previously Presented) The device of claim 27 wherein a surface area of the portion of the metallic lead in contact with the electrical connection region and affixed thereto is less than the surface area of the portion of the first face.

29. (Previously Presented) The device of claim 27 wherein a second end of the metallic lead is affixed to a flexible strip.

30. (Previously Presented) The device of claim 27 wherein a second end of the metallic lead is affixed to a contact pad on a ceramic base.

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31. (Currently Amended) An electronic device, comprising:

a body of semiconductor material having ~~a~~ first and ~~a~~ second faces parallel to each other, and a third face transverse to the first and second faces;

an electrical connection region formed on a periphery of said first face;

a covering structure, covering said first face and having a face ~~transverse-coplanar with~~ the first ~~third~~ face;

an opening in said covering structure, the opening sized and positioned to expose a portion of the first face, including said electrical connection region, and configured to admit a lead extending from a direction transverse to the ~~transverse-third face-of-the-covering-structure,~~ to contact the electrical connection region; and

a heat dissipation region, in direct contact with said second face.

32. (Currently Amended) An electronic device, comprising:

a body of semiconductor material having first and second faces substantially opposite each other and a third face lying in a plane transverse to the first and second faces;

an electrical connection region formed on a periphery of said first face;

a covering structure, covering said first face;

a metallic lead affixed to the connection region and ~~extending-across~~ intersecting the plane of the third face;

an opening in the covering structure positioned over the connection region and configured to provide access thereto, the opening being larger than an end of the metallic lead positioned therein; and

a heat dissipation region, in direct contact with said second face.

33. (Cancelled)

34. (New) A semiconductor device, comprising:

a semiconductor material body having an upper face and a side face;

an electronic component formed in the semiconductor material body;

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an electrical connection region formed on the first face and in electrical contact with the electronic component;

C1 a covering structure formed on the upper face of the semiconductor material body and having upper and side faces, the upper face of the covering structure being approximately parallel to the upper face of the body and the side faces of the covering structure and body being coplanar with each other; and

an opening in the covering structure, extending in portions of the upper and side faces thereof, the opening sized and positioned to expose the electrical connection region.

35. (New) The semiconductor device of claim 34, further comprising a metallic lead affixed to the electrical connection region and extending laterally from the semiconductor material body.
